

## **FIV, Udvalget for Forskning, Innovation og Videregående Uddannelser**

### **Morten Østergaards tale ved ATV's 75 års jubilæum**

I tilknytning til ATV's foretræde i FIV tirsdag 12. juni 2012 omdeles til orientering uddannelsesministerens tale (på engelsk) ved ATV - jubilæet 4. juni 2012.

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# Flere heste end traktorer

Uddannelsesminister Morten Østergaards tale ved Akademiet for de Tekniske Videnskaber (ATV) 75 års jubilæum 1. juni 2012. Talen er på engelsk.

## **Det talte ord gælder.**

I would like to wish the Danish Academy of Technical Sciences congratulations on its 75th anniversary. It's a significant anniversary that we're celebrating.

75 years ago, the world looked a lot different than today. Denmark was embracing industrialisation. The infrastructure was being developed and the Little Belt Bridge was inaugurated just two years earlier – creating the first connection between Jutland and Funen.

The telephone had been widespread throughout the country, though still reserved for the few. Individual forms of production were gradually replaced by large scale mass production and the increased use of machinery.

There were still more horses than tractors used in agriculture. But there were a lot of horsepower behind an ever-accelerating industrialisation in Denmark. Industrialisation required new education, especially within technical fields. And national school reforms made it easier for the growing middle-class to attend higher education.

I believe that we today face another change: a transformation on par with industrialisation.

We are leaving behind the logic and mentality of the industrial age to transform ourselves into – what for the lack of a better term – could be called an innovation society. Where natural resources were crucial to the industrial age – creativity and knowledge are key contributing factors in the innovation society. And just as it was in the past, a boost in education is crucial to the transformation.

We must prepare ourselves as individuals in a constantly changing society. A changing society; where our most important resource is brain power. And thereby a society where we can never be too educated.

## **Europe and Denmark's challenges**

Today you cannot open a paper or watch the news without being reminded again and again that Europe is in a crisis. Productivity is dropping. Growth is low. Our population is ageing. And we face global competition from countries that have lower production costs and higher growth.

But great challenges also offer great opportunities. Because it is future challenges that will drive future innovation. And that is where we can find growth. Challenges therefore also provide part of the solution.

But solutions to these challenges cannot just be handed over by politicians and government. These solutions must be created. Created on a foundation of high quality education, excellent research and strong innovation.

We cannot and will not compete against low salaries and bad working conditions. If we are to provide for Denmark's future, we need to transform our society on a fundamental level.

## **Boosting education**

To successfully transform from an industrial society to an innovation society, we face three must-win battles:

Firstly, we need a historic boost in education and qualifications. The Government's 2020 plan has shown how we can fund this. In 2020, we will ensure that 60 per cent of all young people will get a higher education. And 25 per cent will obtain a university degree.

The jobs lost during the crisis were primarily unskilled. The jobs we create in the future will require qualifications.

This reminds me of one of my favourite stories; Not long ago I visited a leading Danish medical technical firm, which has a fully automated production operated by two employees in the factory.

One of the workers remembered the mantra from her childhood: *"Pay attention in school, or you'll end up in the factory"*. She now tells her own children: *"Pay attention in school – or you won't be able to get work in the factory"*.

Some fear that we are over-educating people – let me say this:

We can never be too educated.

We need to educate even more.

We need more talent and creativity.

That is the first must-win battle.

## **Excellent research**

The second must-win battle concerns research.

From day 1, the Government has maintained that the target of spending 1 per cent of GDP on research, should not be a boundary but a baseline. We must create even stronger research environments, where excellent research can benefit us all and create the foundation for new innovation.

The Government will also prioritise university basic research funding. We must ignore the myth that basic research does not lead to innovation. 16 per cent of patents that resulted from publicly-

financed research were obtained by our basic research centres – which had only received 2 per cent of the funding.

It is essential to ensure that knowledge is recognised and utilised to create new solutions and added value. I know that ATV is also very concerned about this.

We need to be better at helping knowledge from our universities and research institutions pass through the so-called Valley of Death. The Valley of Death is the chasm between our ability to create new knowledge and our ability to translate that knowledge to products, services and growth.

There must be a shorter path between public investments in research and education, to growth and job creation. Universities need to enter strategic alliances with businesses, with excellent research as a starting point. We need to build a bridge over the Valley of Death.

It is the second must-win battle to forge these connections.

## **Innovation and ingenuity**

The third must-win battle on the path to an innovation society, concerns our innovation capacity.

Three months ago, I launched an intensive process that will lead to Denmark's first, collective and ambitious innovation strategy later this year. The basis for the strategy includes the grand societal challenges we face within health, climate and energy.

The innovation strategy will utilise Denmark's tradition of interdisciplinary thinking. It will improve our ability to find solutions to societal challenges and create globally-competitive jobs and companies.

Denmark must be a nation of solutions. And the innovation strategy will be an expression of liberation from existing barriers and conventional thinking.

We need to create a new culture of cooperation between the public and private sectors. The Government will bring the public sector into play to accelerate the development of new solutions and jobs. This will be through a new model for cross-disciplinary partnerships, which are targeted at specific challenges.

An innovation society needs large-scale innovation. And it requires that we set ambitious targets for the transformation that our efforts will lead to.

We need new solutions that reflect reality. We can develop our drive and use the fact that we are a well-organised society that should be able to commit to being an innovation society – as our situation demands.

Research is an important element in the innovation strategy. As is education.

It is my ambition to improve the education system to meet future challenges. It requires innovative education programmes, a focus on career guidance and a change of mindset among students and

educators. Students shouldn't just be listening to lectures and sub-mitting exam papers. Thoughts and ideas must be transformed to new products, processes and companies. Students must create change, be enterprising, and be able to see through an idea to its development.

Creativity and ingenuity are vital if Denmark is to be a leading innovation society.

Take LEGO for example. There is an average of 75 LEGO bricks per person on this planet – and it's not because they were produced in Billund. But because the company consistently works creatively to innovate its products. There are lots of other plastic building bricks available worldwide, often cheaper than LEGO, but kids want LEGO because they want to be part of the LEGO creative universe. No creativity – no LEGO.

Our third must-win battle is to increase our innovation capacity and motivate more young people to be creative, enterprising and daring.

## **Research, education and innovation**

I would like to conclude by thanking the Danish Academy of Technical Sciences for your persistent and qualified contribution to the development of Denmark.

You have been with us from the time when telephones were a rarity, since we only had one bridge over the Little Belt and since there were more horses than tractors in Danish agriculture. You have been with us since industrialisation changed Danish society. And you are still here.

ATV is no less important nowadays when we face yet another transformation on par with industrialisation.

One of the founders of the Academy, Professor P.O. Pedersen, was very explicit when he had to explain the reason for the establishment of the Academy – and I quote: *Denmark has only one factor that we have the opportunity to improve: our skills.*

This argument is still relevant to day.

Denmark's drive is a dynamic approach to education, research and innovation.

These are our three must-win battles:

- We must educate more.
- We need better bridges between research and companies.
- And we must increase our innovation capacity.

Thank you.